Enclosure 1

BEFORE THE UNITED STATES NUCLEAR REGULATORY COMMISSION

Application of SOUTHERN CALIFORNIA EDISON COMPANY and SAN DIEGO GAS & ELECTRIC COMPANY for a Class 104(b) License to Acquire, Possess, and Use a Utilization Facility as Part of Unit No. 1 of the San Onofre Nuclear Generating Station	)	DOCKET NO. 50-206 Amendment No. 192

SOUTHERN CALIFORNIA EDISON COMPANY and SAN DIEGO GAS & ELECTRIC COMPANY, pursuant to 10 CFR 50.90, hereby submit Amendment Application No. 192.

This amendment consists of Proposed Change No. 240 to Provisional Operating License No. DPR-13. Proposed Change No. 240 is a request to revise Appendix A, Technical Specifications 3.6.1, 4.3.1 and 5.2 to revise the minimum pressure for containment integrity testing, change the description for the supplemental accuracy verification test for the Integrated Leak Rate Test (ILRT), update the containment design pressure, update the peak containment pressure reached in containment during a design basis accident, and revise the frequency of the ILRT to decouple it from the 10 year plant inservice inspection.

In the event of conflict, the information in Amendment Application No. 192 supersedes the information previously submitted.

Based on the significant hazards analysis provided in the Description and Significant Hazards Consideration Analysis of Proposed Change No. 240, it is concluded that (1) the proposed change does not involve a significant hazards consideration as defined in 10 CFR 50.92, and (2) there is reasonable assurance that the health and safety of the public will not be endangered by the proposed change.

Subscribed on this 22nd day of MAY, 1991.

Respectfully submitted,

SOUTHERN CALIFORNIA EDISON COMPANY

By: Harold B. Ray
Harold B. Ray
Senior Vice President

State of California
County of Orange
On MAY 22, 1991 before me, BARBARA A. McCARTHY/NOTARY PUBLIC, personally appeared HAROLD B. RAY, personally known to me to be the person whose name is subscribed to the within instrument and acknowledged to me that he executed the same in his authorized capacity, and that by his signature on the instrument the person, or the entity upon behalf of which the person acted, executed the instrument.

WITNESS my hand and official seal.

Signature Barbara A. McCarthy

OFFICIAL SEAL
BARBARA A. MC CARTHY
Notary Public-California
ORANGE COUNTY
My Commission Expires
March 31, 1995

James A. Beoletto
Attorney for Southern
California Edison Company

By: James A. Beoletto
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DESCRIPTION AND SIGNIFICANT HAZARD CONSIDERATION ANALYSIS
OF PROPOSED CHANGE NO. 240
TO PROVISIONAL OPERATING LICENSE NO. DPR-13

The following is a request to revise Sections 3.6.1, "Containment Sphere," and 4.3.1, "Containment Testing," of the Appendix A Technical Specifications for San Onofre Nuclear Generating Station, Unit 1.

DESCRIPTION OF CHANGE

The peak pressure reached in containment following a design basis accident has been recalculated due to containment spray system modifications during the Cycle 11 refueling outage. This change revises the technical specifications to change the test pressure for containment integrated and local leak rate testing so that the new calculated peak pressure values are enveloped. The design pressure of the containment sphere has also been recalculated to envelope the new peak pressure values.

Additionally, changes are proposed to Technical Specification 4.3.1 to clarify the definition of the supplemental test performed to verify the accuracy of the integrated leak rate test and to revise the frequency requirement to decouple it from the 10 year in-service inspection.

EXISTING TECHNICAL SPECIFICATIONS

See Attachment 1.

PROPOSED TECHNICAL SPECIFICATIONS

See Attachment 2.

DISCUSSION

Specification 3.6.1 Basis Revision

Technical Specification 3.6.1 limits the pressure inside containment during operation to a maximum of 0.4 psig. The basis explains that the reason for limiting the internal pressure of the containment sphere during operation to 0.4 psig is to assure that the design pressure of the sphere is not exceeded in the event of a design basis accident. The analyses which determine the pressure inside containment following a main steam line break or LOCA were revised during the Cycle 11 refueling outage and included the 0.4 psig maximum initial pressure as an input. Therefore the basis of Technical Specification 3.6.1 is clarified by PCN-240 to state that the reason for the 0.4 psig limitation is to prevent the pressure inside containment following a design basis accident from exceeding the calculated peak pressure value of 52.0 psig.

Containment Test Pressure

PCN-240 increases the minimum containment test pressure from 49.4 psig to 52.0 psig. The increase envelopes the results of the revised containment peak temperature and pressure calculations performed as a result of modifications to the containment spray system. The modifications to the containment spray system were performed during the Cycle 11 refueling outage and change the flow characteristics of containment spray. A summary of the results of the revised temperature and pressure calculations were provided to the NRC in our letter dated February 8, 1991.

The peak pressure value of 52.0 psig is generated inside containment following a design basis main steam line break accident. PCN-240 revises Technical Specification 4.3.1 to specify 52.0 psig as the minimum pressure to be used for containment integrated and local leak rate testing.

Containment Design Pressure

We have also revised the design pressure of the containment sphere from 51.0 psig to 52.7 psig. We have completed stress calculations demonstrating that a design pressure of 52.7 psig will not cause the stresses allowed by the ASME code to be exceeded in the sphere in the event of a design basis earthquake occurs when the containment is at design pressure. The stress calculations compare the stresses caused by different load combinations to the maximum stresses allowed by the ASME code. Because the stresses allowed by the ASME code have a built in safety margin, the additional margin between the actual calculated stress in the sphere and the ASME allowable stress is referred to as surplus margin.

The containment stresses and surplus margins for the various cases are summarized in Table 1. The stress calculations show the combination of design pressure inside containment with an operating basis earthquake (OBE) has no surplus margin. The calculated stresses are equal to the ASME code allowable

stresses. The smallest margin for the design basis earthquake (DBE) case is 1.04.

Although the stress calculation indicates the surplus margin for the combination of OBE and design pressure is 1.00, the calculation contains conservatisms beyond that built into the ASME code because the design pressure (52.7) is used rather than the calculated peak pressure (52.0). The peak pressure is reached during a design basis accident. The design pressure can only be reached during an ILRT. Other factors such as high temperatures and dynamic effects are present during a design basis accident and are accounted for in the stress calculation. Because these effects will not be present during an ILRT, the stress calculations are conservative by using the design pressure for calculation rather than the peak pressure. Using the peak pressure for the calculation would result in a surplus margin of approximately 1.01.

Containment ILRT Supplemental Test

Part I of Technical Specification 4.3.1 discusses the ILRT test pressure, acceptance criteria, and frequency. Part of the acceptance criteria provides methods for performing a supplemental test to determining the accuracy of the ILRT.

As discussed in our May 4, 1988 letter to the NRC, the supplemental test for the ILRT is performed in accordance with the methodology of ANSI/ANS 56.8-1981. The standard indicates that the supplemental test can be performed by an imposed leakrate test or by a pump back test. The leakrate test is based on an imposed leakage rate and the pump back test is based on a mass of air. This is consistent with the Westinghouse Standard Technical Specifications (STS) which state in Section 4.6.1.2.c.3 that the accuracy shall be verified by a supplemental test which:

> "...requires the quantity of gas injected into the containment or bled from the containment during the supplemental test to be equivalent to at least 25 percent of the total measured leakage at P_a (50 psig) or P_t (25 psig)."

The SONGS 1 Technical Specifications in 4.3.1.I.B(2):

> "...requires the quantity of air bled from or injected into the containment during the supplemental test to be equivalent to at least 75 percent of the total allowable leakage rate at 49.4 psig"

As indicated in our May 4, 1988 letter this supplemental test requirement is confusing since it equates mass of air with leakage rate. In order to resolve this confusion, this proposed change revises 4.3.1.I.B(2) to be consistent with the Westinghouse STS. This revision to the technical specifications will not affect or change our methodology for performing the ILRT supplemental test.

Containment ILRT Frequency

Technical Specification 4.3.1 also specifies a frequency of 40 ± 10 months for the performance of the ILRT. During each 10 year period, the third ILRT is to be performed when the plant is shutdown for the 10 year plant inservice inspection. Due to SCE's extension of the 10 year plant ISI caused by extended plant outages, a conflict occurred in performing the third ILRT along with the 10 year plant ISI. Specifically, our letter dated August 2, 1988, indicated the 10 year ISI expiration date was November 30, 1991. Implementation of the 40 ± 10 month interval required that an ILRT be performed during the Spring of 1988. Accordingly, the plant was shutdown to perform the ILRT, but the shutdown and test did not meet the criterion that the third test of each set be performed during the 10 year ISI outage. In summary, the existing specification for ILRT frequency does not accommodate extensions of the 10 year ISI interval. Accordingly, this proposed change revises Specification 4.3.1.I.C to remove the 10 year ISI requirement.

The revision to Technical Specification 4.3.1 excludes the provisions of Specification 4.0.2. The exclusion of Specification 4.0.2 is necessary to preclude application of an additional 25% extension onto the 40 ± 10 month frequency and is consistent with the Westinghouse Standard Technical Specifications.

TABLE 1
SUMMARY OF CONTAINMENT STRESSES
Internal Pressure = 52.7 psig

Location	Condition	General Primary Membrane Stress Intensity			General Primary Membrane Plus Primary Bending Stress Intensity		
		P_M psi	Allowable psi	Surplus Margin	P_M+P_B psi	Allowable psi	Surplus Margin
Continuous shell	Internal Pressure	21,713	22,600	1.04	-	-	-
	Design + OBE	22,584	22,600	1.00	22,606	33,900	1.50
	Design + DBE	23,573	27,120	1.15	23,616	40,680	1.72
Gross structural discontinuity at grade level	Design + OBE	21,847	22,600	1.04	23,487	33,900	1.44
	Design + DBE	25,978	27,120	1.04	30,116	40,680	1.35
	Primary + Secondary Stress Intensity = 62,801 psi < 67,800 psi = $3S_M$						
Containment shell at equipment hatch	Design + OBE	23,426	33,900	1.45	29,908	33,900	1.13
	Design + DBE	27,878	40,680	1.46	34,462	40,680	1.18
Containment shell at personnel hatch	Design + OBE	24,073	33,900	1.41	-	-	-
	Design + DBE	29,817	40,680	1.36	-	-	-

P_M for internal pressure only of 53.4 psig (initial sphere test pressure) is 22,002 psi.

SIGNIFICANT HAZARDS CONSIDERATION ANALYSIS

As required by 10 CFR 50.91(a)(1), this analysis is provided to demonstrate that Proposed Change No. 240 which revises Technical Specifications 3.6.1, 4.3.1, and 5.2 does not represent a significant hazards consideration. In accordance with the three factor test of 10 CFR 50.92(c), implementation of the proposed license amendment was analyzed using the following standards and found not to: 1) involve a significant increase in the probability or consequences for an accident previously evaluated; or 2) create the possibility of a new or different kind of accident from any accident previously evaluated; or 3) involve a significant reduction in a margin of safety.

1. Will operation of the facility in accordance with this proposed change involve a significant increase in the probability or consequences of an accident previously evaluated?

   RESPONSE: NO

   Operation of the facility in accordance with this proposed change will not involve an increase in the probability or consequences of an accident previously evaluated.

   This proposed change makes the following changes to the technical specifications:

   - Increases the minimum pressure for containment integrity testing from 49.4 psig to 52.0 psig (the pressure for the reduced pressure test has also been increased from 24.7 psig, which is 50% of 49.4 psig to 26.0 psig, which is 50% of 52 psig).

   - Revises the containment sphere design pressure from 51.0 psig to 52.7 psig.

   - Revises the requirement to perform every third integrated leak rate test in conjunction with the plant 10 year inservice inspection. The new requirement states that the ILRT tests must be performed during outages, but is no longer coupled to the 10-year inservice inspection.

   - Changes the description for the ILRT supplemental test which verifies the accuracy of the ILRT.

Containment Test Pressure

The change to increase the minimum pressure for performing ILRT and ILRT testing was required as a result of plant modifications performed during the Cycle 11 refueling outage. The plant modifications result in a higher peak pressure after a design basis accident. The containment leak testing is done to assure that the containment will retain its integrity during a design basis accident. To assure that the total leakage would be within acceptable limits during a design basis accident, the leakage tests are performed at a pressure greater than or equal to the maximum pressure generated during a design basis accident or P_a.

As a result of the plant modifications, the analyses which determine the peak pressure inside containment following a design basis accident were revised. It was determined that the peak accident pressure following a main steam line break inside containment would be 52.0 psig . This change will increase the minimum test pressure to 52.0 psig to envelope the new calculated peak value. Testing the containment at this new peak pressure does not affect the accident probability or consequences of an accident previously evaluated.

Containment Design Pressure

The revision of the containment design pressure was performed in compliance with the applicable ASME code sections. The maximum stresses in the sphere created by the combination of design pressure in the sphere and a design basis or an operating basis earthquake will not exceed the maximum stresses allowed by the ASME code. This assures that containment integrity will be maintained and that using 52.7 psig as the design pressure will not involve a significant increase in the probability or consequences of an accident previously evaluated.

ILRT Verification Test Frequency

This proposed change also revises the ILRT frequency to remove the requirement that every third ILRT in a 10 year interval be performed in conjunction with the 10 year plant inservice inspection. The ASME Code allows the 10 year plant inservice inspection to be extended due to lengthy plant outages, but does not apply to the ILRT. While retaining the 40 $\pm$ 10 month frequency, the ILRT has been decoupled from the 10 year plant inservice inspection. This change has no impact on accident probability or consequences since it ensures that an ILRT is performed on the specified frequency without any connection to the 10 year plant inservice inspection. Performance of the ILRT ensures the containment integrity is maintained and the probability or consequences of an accident are not changed by this change.

The proposed change also revises the technical specification for performing containment integrated leakrate tests (ILRT). It provides clarification for performing the ILRT supplemental test to be consistent with the Westinghouse Standard Technical Specification (STS). This change does not affect the manner in which the containment ILRT is performed. The ILRT supplemental test will continue to be performed in accordance with the guidance of ANSI/ANS 56.8-1981, Containment System Leakage Testing Requirement. The probability or consequences of an accident are not affected by this clarification.

2. Will operation of the facility in accordance with this proposed change create the possibility of a new or different kind of accident from any accident previously evaluated?

RESPONSE: NO

Containment Test Pressure

The change to increase the minimum test pressure will assure that containment integrity testing is performed at or above the highest pressure which could develop following a design basis accident. This will assure that containment leakage will remain within the technical specification limits in the event of an accident. The increase in test pressure only assures that the peak pressure from the worst case design basis accident is enveloped by integrity testing. The possibility of a new or different kind of accident than previously evaluated is not created.

Containment Design Pressure

The revision of the containment design pressure from 51.0 psig to 52.7 psig assures that an adequate testing margin will be available when performing the ILRT testing. The calculations performed to revise the containment design pressure show that the allowable stresses from the ASME code are not exceeded. Therefore the possibility of a new or different type of accident than previously evaluated is not created.

ILRT Frequency

Operation of the facility in accordance with this proposed change will not create the possibility of a new or different kind of accident. This change revises the technical specification of the ILRT supplemental test and removes the requirement for performing the ILRT with the 10 year plant inservice inspection. It will not change the technical specification 40 $\pm$ 10 month frequency for the ILRT. Since the ILRT is a test which demonstrates containment

integrity throughout plant life, it has no impact on creating accidents. Therefore, the possibility of a new or different kind of accident than any accident previously evaluated will not occur.

3. Will operation of the facility in accordance with this proposed change involve a significant reduction in a margin of safety?

RESPONSE: NO

Containment Test Pressure

The increase in the containment test pressure assures that the ILRT and LLRT testing will envelope the peak pressure developed following a design basis accident. By testing to a pressure which will envelope the highest calculated pressure in containment possible, the margin of safety is maintained. Therefore this change does not involve a significant reduction in a margin of safety.

Containment Design Pressure

The increase in containment design pressure is verified by calculations in accordance with the ASME code. These calculations demonstrate that the maximum stresses in the steel containment sphere following a design basis accident concurrent with an earthquake will not exceed the stresses allowed by the ASME code. Although the increased design pressure does require a decrease in surplus margin, there is no decrease in actual margin. The surplus margin is the margin between the actual stress in the containment sphere and the ASME code allowables. Therefore, this change does not involve a significant reduction in a margin of safety.

ILRT Frequency

Operation of the facility in accordance with this proposed change will not reduce a margin of safety. This change clarifies the containment ILRT supplemental test and revises the frequency requirement to remove the connection with 10 year plant inservice inspection. The ILRT will still be performed in the same manner and in accordance with the 40 $\pm$ 10 month technical specification frequency. The margin of safety for the containment is not affected. Therefore, it is concluded that operation of the facility in accordance with this proposed change does not involve a significant reduction in a margin of safety.

SAFETY AND SIGNIFICANT HAZARDS CONSIDERATION DETERMINATION

Based on the preceding analysis, it is concluded that: (1) Proposed Change No. 240 does not involve a significant hazards consideration as defined by 10 CFR 50.92; and (2) the health and safety of the public will not be endangered by the proposed change.

Attachment 1 - Existing Specifications
Attachment 2 - Proposed Specifications

PCN-240.MG